CLAIMS

1. Device for automatically centring a laser beam in a light guide (32), this device being characterised in that it comprises a volume scatterer (2) comprising an entry face for the laser beam and designed to scatter this laser beam and automatically centre it in the light guide.

2. Device for automatically centring a laser beam in a monomode or multimode optical fibre (32), this device being characterised in that it comprises a volume scatterer (2) comprising an entry face for the laser beam and designed to scatter this laser beam and automatically centre it in the optical fibre.

3. Device according to claim 1, in which the thickness (L) of the volume scatterer (2) is equal to at least 100 times the wavelength of the laser beam.

4. Device according to claim 1, in which the volume scatterer (2) is made of polytetrafluorethylene.

5. Device according to claim 1, in which the volume scatterer (2) is cylindrical.

6. Device according to claim 1, in which the volume scatterer (2) comprises a side face and the device also comprises a light reflector (6, 14) that surrounds this side face.

7. Device according to claim 1, also comprising a lens (10) placed on the entry face of the volume scatterer (2) and designed to defocus the light beam on this entry face.

8. Device according to claim 1, in which the volume scatterer (2) comprises a side face and the device also comprises a light reflector (14) that surrounds this side face, and is prolonged beyond the entry face and guides the light beam as far as this entry face.

9. Device according to claim 1, also comprising an auxiliary optical fibre (16) that is optically coupled to the entry face of the volume scatterer (2) and guides the light beam as far as this entry face.

10. Method of manufacturing the device according to claim 1, in which a tubular light guide (6) is manufactured and the volume scatterer (2) is made from a material (34) capable of scattering light, using the tubular light guide as a cutting punch.

11. Device according to claim 2, in which the thickness (L) of the volume scatterer (2) is equal to at least 100 times the wavelength of the laser beam.

12. Device according to claim 2, in which the volume scatterer (2) is made of polytetrafluorethylene.

13. Device according to claim 2, in which the volume scatterer (2) is cylindrical.

14. Device according to claim 2, in which the volume scatterer (2) comprises a side face and the device also comprises a light reflector (6, 14) that surrounds this side face.

15. Device according to claim 2, also comprising a lens (10) placed on the entry face of the volume scatterer (2) and designed to defocus the light beam on this entry face.

16. Device according to claim 2, in which the volume scatterer (2) comprises a side face and the device also comprises a light reflector (14) that surrounds this side face, and is prolonged beyond the entry face and guides the light beam as far as this entry face.

17. Device according to claim 2, also comprising an auxiliary optical fibre (16) that is optically coupled to the entry face of the volume scatterer (2) and guides the light beam as far as this entry face.

18. Method of manufacturing the device according to claim 2, in which a tubular light guide (6) is manufactured and the volume scatterer (2) is made from a material (34) capable of scattering light, using the tubular light guide as a cutting punch.